Asbestos and Lead-Based Paint Survey Report

Building M82 – Old Navy Yard
Former Police Station
North Charleston, South Carolina

February 3, 2020
Terracon Project No. EN197470

Prepared for:
Palmetto Railways
Charleston, South Carolina

Prepared by:
Terracon Consultants, Inc.
North Charleston, South Carolina

Inspected by:
Craig C. Langford (SC ASB-22775)

February 3, 2020

Palmetto Railways
540 East Bay Street
Charleston, South Carolina 29403

Attn: Alec Thompson
Phone: (843) 737-8440
Email: athompson@palmettorail.com

Re: Asbestos and Lead-Based Paint Survey Report
Building M82 – Old Navy Yard
Former Police Station
North Charleston, South Carolina
Terracon Project No. EN197470

Dear Mr. Thompson:

Terracon Consultants, Inc. (Terracon) is pleased to present the results of the asbestos and lead-based paint survey performed January 13, 2020, of Building M82, former police station, located at the Old Navy Yard in North Charleston, South Carolina. We understand that this survey was requested due to the planned renovation or demolition of the building.

Terracon appreciates the opportunity to provide environmental consulting services. If you should have any questions regarding this report, or if you need assistance with bid documents or project oversight during the building renovation/demolition, please contact the undersigned at (843) 277-8402.

Sincerely,
Terracon Consultants, Inc.

Craig C. Langford, OHST
Senior Industrial Hygienist

Jeffrey A. Gurrie, CIH
Authorized Project Reviewer

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EXECUTIVE SUMMARY

This executive summary is intended as an overview for the convenience of the reader. The report should be reviewed in its entirety prior to making any decisions regarding this site.

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead survey for Building M82 (former police station) located on the Old navy Yard in North Charleston, South Carolina. It was our understanding that Palmetto Railways plans to renovate the building. The purpose of this survey was to sample and identify lead-based paint, suspect asbestos-containing materials (ACM), and provide information regarding the identity, location, condition and approximate quantities of ACM in interior and exterior building components.

The survey was performed on January 13, 2020, by a South Carolina Department of Health and Environmental Control (SCDHEC) licensed asbestos inspector in general accordance with our proposal dated December 18, 2019, and the sampling protocols established in EPA 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA) and the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects.

Forty-one (41) bulk samples were collected from homogeneous areas of suspect ACM. Based on the results of laboratory analysis, the following suspect materials were identified as asbestos containing materials (ACMs) defined as containing >1% asbestos:

- Non-friable caulking located on exterior doors; approximately 250 LF

Terracon recommends removal of the asbestos-containing materials by a South Carolina licensed asbestos abatement contractor prior disturbance of these materials during renovation of the building.

Six (6) paint-chip samples were collected from the components of the structure on the site. Five (5) sample results were above the EPA definition of lead paint of 0.5% and the SCDHEC 0.06% by weight threshold for disposal. Based on the testing all paints, except the exterior black hand rail paint, should be assumed to be lead-containing.

- White paint on exterior column,
- Black paint on exterior rails,
- Multiple paint layers on interior stairwell,
- Multiple layers on side exterior stair case

Federal, state and local regulations should be referred to in order to verify compliance before any actions are initiated on ACMs or LBP.

ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT
BUILDING M82 – OLD POLICE STATION, OLD NAVY YARD
NORTH CHARLESTON, SOUTH CAROLINA
PROJECT NO. EN197470
INSPECTION DATE: January 13, 2020
REPORT DATE: February 3, 2020

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead survey of building materials of Building M82 (Old Police Station) located in the Hospital District of the Old Navy Yard in North Charleston, South Carolina. The survey was conducted on January 13, 2020, by a South Carolina Department of Health and Environmental Control (SCDHEC) licensed building inspector in general accordance with our Proposal No PEN197470 Rev1 dated December 18, 2019, and Palmetto Rail Continuing Services Agreement dated November 1, 2019. The purpose of this survey was to sample and identify lead-based paint, suspect asbestos-containing materials (ACM), and provide information regarding the identity, location, condition and approximate quantities of ACM in interior and exterior building components.

Terracon understands that the building may be renovated or demolished but the exact plans are unknown. Environmental Protection Agency (EPA) regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation/demolition activities. NESHAP and SCDHEC requires that potentially regulated asbestos-containing building materials be identified, classified and quantified prior to planned disturbances or demolition activities.

Suspect ACM was sampled in general accordance with the sampling protocols outlined in EPA Regulation 40 CFR 763 Subpart E763.86 (Asbestos Hazard Emergency Response Act, AHERA) and SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. Interior and building components were surveyed and homogeneous areas of suspect asbestos-containing materials (ACM) were visually identified and documented. Although reasonable effort was made to survey accessible suspect materials, additional suspect but un-sampled materials could be located in walls, in voids or in other concealed areas. Samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM), as required.

[insert LBP paragraph]

2.0 BUILDING DESCRIPTION

The building is an approximately 6,500 ft^2 structure. The site consists of a three story building and a basement area with a partial crawlspace. The building once served as a North Charleston Police Sub-station. The exterior is constructed with a brick façade and has a pitched shingled

roof on the main portion of the building with a flat rolled roofing on the rear portion. Interior finishes are wallboard system, flooring materials, lay-in ceiling tiles panels, cove base materials, and flooring mastics. The 1st, 2nd, and 3rd floors were heated and cooled by interior wall mounted HVAC units. The basement was heated a cooled by a heat pump system with fiberglass (with mastic) duct system

Suspect ACMs sampled were:

- Wallboard system (drywall and joint compound)
- Stair Tread/mastics
- Ceiling Tiles
- Floor Tile/Mastics
- Cove Base/Mastics
- HAVC duct mastic
- Door and Window Caulking
- Roofing Shingles/felt
- Rolled roofing materials

Non-suspect ACMs include fiberglass insulation, rubber/silicon window caulking.

3.0 ASBESTOS SURVEY

The asbestos survey was conducted by SCDHEC licensed Asbestos Building Inspector Mr. Craig C. Langford (License No. ASB-22775 Exp. 07/09/20). A copy of Mr. Langford's license is included in Appendix D. The survey was conducted on January 13, 2020, in general accordance with the sampling protocols established by EPA Regulation 40 CFR 763 Subpart E 763.86, AHERA and SCDHEC R. 61-86.1. A summary of survey activities is provided below.

3.1 Regulatory Overview

An ACM is defined as any material containing asbestos of any type in an amount greater than one percent (1%). The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non friable ACM includes packing materials, gaskets, resilient floor coverings and asphalt roofing products containing more than 1 percent (%) asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation/demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

In the state of South Carolina, asbestos activities are regulated by the SCDHEC under the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. The SCDHEC require that any asbestos-related activity conducted in a public building be performed by personnel licensed by the SCDHEC. The owner or operator must provide the SCDHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. The SCDHEC requires 4 day notification for non-friable projects and 10 day notification for RACM projects. Asbestos abatement must be performed by SCDHEC-licensed asbestos abatement contractors. A SCDHEC-licensed Project Designer shall prepare a written abatement design for each abatement renovation project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SCDHEC asbestos regulations can be found at http://www.scdhec.gov.

The Occupational Safety and Health Administration (OSHA) Asbestos Standard for Construction Industry (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc) for an eight-hour time weighted average. The OSHA standard classifies construction and maintenance activities, which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. A full copy of the OSHA asbestos standard for general industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

3.2 Visual Assessment

Our survey activities began with visual observation of the exterior and interior of the building to identify apparent homogeneous areas of suspect ACM. A homogeneous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. Building materials which were not identified as concrete, glass, wood, masonry, metal or rubber were considered suspect ACM.

Terracon lifted floor coverings in several areas, where possible, and did not observe additional flooring layers unless mentioned in this report; however, as Terracon could not assess beneath all floor covering in all areas, there may be isolated areas of additional suspect material present beneath existing flooring.

3.3 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material, which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.4 Sample Collection

Based on our observations, bulk samples of suspect ACMs were collected in general accordance with SCDHEC and EPA sample collection protocols. Random samples of suspect materials were collected in each homogeneous area. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

The selection of sample locations and frequency of sampling was based on Terracon's observations and the assumption that like materials in the same area are homogeneous in content.

A summary of the suspect ACM samples collected during the survey is presented in Table 1 in Appendix A. Sample locations are depicted on a Figure 1 in Appendix B.

3.5 Sample Analysis

Bulk samples were submitted under chain of custody to EMSL Analytical Laboratories in Kernersville, North Carolina for analysis by Polarized Light Microscopy (PLM) with dispersion staining techniques per EPA EPA/600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopical visual estimation. EMSL is accredited under the National Voluntary Laboratory Accreditation Program NVLAP.

Per the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects, negative results for non-friable organically bound (NOB) materials such as flooring and roofing shall be verified with at least one TEM analysis. The additional analysis was performed by TEM in accordance with EPA/600/R-93/116 Section 2.5.5.1.

3.6 Findings and Recommendations

Thirty-seven (37) bulk samples were collected from homogeneous areas of suspect ACM. Table 1 in the Appendix A summarizes the results of the visual inspection, estimated quantities, and laboratory analyses. A site diagram with sample locations (Figure 1) is included in Appendix B. Asbestos laboratory analytical reports, certificates of analysis with the chain of custody, are included in Appendix C. Based on the results of laboratory analysis, the following materials were identified as asbestos containing materials (ACMs) defined as containing >1% asbestos:

- Non-friable caulking located on exterior doors; approximately 250 LF

If the ACMs listed above will be disturbed during renovation activities, they should be handled in accordance with the applicable OSHA standards and SCDHEC regulation 61-86.1 – Standards of Performance for Asbestos Projects. Written notification must be submitted to SCDHEC ten (10) business days prior to the renovation or demolition activities.

If load-bearing walls are scheduled to be removed as part of this renovation project, a SCDHEC demolition permit is required. A copy of this report must be submitted to SCDHEC (Asbestos Section) at least ten (10) working days prior to demolition of load-bearing walls along with a demolition permit application and associated fees. Once processed SCDHEC will issue a permit. Federal, state and local regulations should be referred to in order to verify compliance before any actions are initiated on an ACM.

In accordance with OSHA's Asbestos Standard, the employer shall notify affected employees and contractors of the presence and location of asbestos-containing materials and test results. A full copy of the OSHA asbestos standard for general industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

It should be noted that suspect materials, other than those identified during the January 8, 2020 survey may exist within the structure. Should suspect materials other than those which were identified during this survey be uncovered during or prior to the abatement and demolition process, those materials should be assumed asbestos-containing until sampling and analysis can confirm or refute their asbestos content. Should future sampling indicate that the other material is asbestos containing, Terracon recommends removal of the asbestos-containing materials by a South Carolina licensed asbestos abatement contractor prior to renovation/demolition of the building.

4.0 LEAD-BASED PAINT SURVEY

4.1 Regulatory Overview

Lead is regulated by the EPA, SCDHEC and OSHA. The EPA and SCDHEC regulate lead use, removal, and disposal, and OSHA regulates lead exposure to workers. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm^2, 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis. The SCDHEC regulations 61-107.19 require that painted demolition debris with a lead concentration greater than 0.06% by weight be disposed in a permitted Class II landfill. For the purpose of the OSHA lead standard, lead includes metallic lead, all inorganic lead compounds, and organic lead soaps. The complete OSHA standard for compliance can be found on OSHA's website (www.osha.gov). A synopsis of the OSHA regulations (29 CFR 1926.62) and the applicability are as follows:

The OSHA *Lead Standard for Construction* (29 CFR 1926.62) applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The lead-in-construction standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions.

Under this standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present
- Removal or encapsulation of materials containing lead
- New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead
- Installation of products containing lead
- Lead contamination/emergency clean-up

- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed
- Maintenance operations associated with construction activities described above

4.2 Sampling and Analytical Protocol

Mr. Langford of Terracon conducted the lead-based paint (LBP) sampling on January 8, 2020. The LBP sampling was conducted by collecting paint chip samples. The paint chip samples were collected from painted or lacquered surfaces of building components likely to contain LBP, based on apparent date of application. The paint samples were collected down to the surface substrate so as to include any underlying paint systems in the analysis. The random paint chip samples were selected based on current paint schemes and may not be inclusive of old paint systems covered with paneling, or existing painted systems. The paint chip samples were submitted to an ELAP accredited laboratory for analysis of lead by NIOSH Method 7082M (atomic absorption).

4.3 Findings and Recommendations

Six (6) paint-chip samples were collected from the components of the structure on the site. Five (5) sample results were above the EPA definition of lead paint of 0.5% and the SCDHEC 0.06% by weight threshold for disposal. Based on the testing all paints, except the exterior black hand rail paint, should be assumed to be lead-containing. The following paints were tested and found to contain lead:

- White paint on exterior column,
- Black paint on exterior rails,
- Multiple paint layers on interior stairwell,
- Multiple layers on side exterior stair case

Painted demolition debris may be disposed in a C&D Landfill. SCDHEC regulations require that the lead painted demolition debris be disposed in a permitted Class II landfill. Landfills should be contacted to determine their specific disposal requirements. Metal components painted with lead-based paint may be recycled; however, the recycler should be contacted to determine their specific requirements.

The South Carolina Department of Environmental Control (SCDHEC) regulations require that painted demolition debris with a lead concentration greater than 0.06% by weight or 0.7 mg/cm^2 be disposed in a permitted Class II landfill. However, coatings that are delaminated, deteriorated, or flaking must be evaluated against the Toxicity Characteristic under state and federal hazardous waste management regulations. Lead-based paint is defined in SC Regulation 61-107.9, "Solid Waste Landfills and Structural Fill." The hazardous waste Toxicity Characteristic is defined in the SC Hazardous Waste Management Regulation 61-79, at § 261.24, "Toxicity Characteristic."

A summary of the lead paint laboratory results is presented in Table 2 in Appendix A. The analytical report is included in Appendix B.

5.0 LIMITATIONS / GENERAL COMMENTS

This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the renovation areas. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date.

This report has been prepared on behalf of and exclusively for use by Palmetto Railways for specific application to their project as discussed. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, express or implied is made.

This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary.

APPENDIX A

TABLES

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
BUILDING M82 - FORMER POLICE STATION
HOSPITAL DISTRICT - OLD NAVY YARD
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
WB3-01	3rd Floor	PLM	None Detected	Drywall	HA-01	Miscellaneous	Friable/Good	2,800 SF
WB3-02	3rd Floor	PLM	None Detected					
WB3-03	3rd Floor	PLM	None Detected					
WB3-01	3rd Floor	PLM	None Detected	Joint Compound	HA-02	Surfacing		
WB3-02	3rd Floor	PLM	None Detected					
WB3-03	3rd Floor	PLM	None Detected					
WB3-04	3rd Floor	PLM	None Detected					
WB3-05	3rd Floor	PLM	None Detected					
CT3-01	3rd Floor	PLM	None Detected	Ceiling Tile	HA-03	Miscellaneous	Friable/Damaged	1,600 SF
CT3-02	3rd Floor	PLM	None Detected					
CT3-03	3rd Floor	PLM	None Detected					
CB3-01	3rd Floor	PLM	None Detected	Cove Base	HA-04	Miscellaneous	Non-friable/Good	200 LF
CB3-02	3rd Floor	PLM	None Detected					
CB3-03	3rd Floor	TEM	None Detected					
CB3-01	3rd Floor	PLM	None Detected	Mastic associated with HA-04	HA-05	Miscellaneous		
CB3-02	3rd Floor	PLM	None Detected					
CB3-03	3rd Floor	TEM	None Detected					
FT3B-01	3rd Floor	PLM	None Detected	12" Black Floor Tile	HA-06	Miscellaneous	Non-friable/Good	700 SF
FT3B-02	3rd Floor	PLM	None Detected					
FT3B-03	3rd Floor	TEM	None Detected					
FT3B-01	3rd Floor	PLM	None Detected	Mastic associated with HA-06	HA-07	Miscellaneous	Non-friable/Good	
FT3B-02	3rd Floor	PLM	None Detected					
FT3B-03	3rd Floor	TEM	None Detected					
FT3-01	3rd Floor	PLM	None Detected	12" White Floor Tile	HA-08	Miscellaneous	Non-friable/Good	600 SF
FT3-02	3rd Floor	PLM	None Detected					
FT3-03	3rd Floor	TEM	None Detected					
FT3-01	3rd Floor	PLM	None Detected	Mastic Associated with HA-08	HA-09	Miscellaneous	Non-friable/Good	
FT3-02	3rd Floor	PLM	None Detected					
FT3-03	3rd Floor	TEM	None Detected					
FT3G-01	3rd Floor	PLM	None Detected	12" Off White/Gray Floor Tile	HA-10	Miscellaneous	Non-friable/Good	500 SF
FT3G-02	3rd Floor	PLM	None Detected					
FT3G-03	3rd Floor	TEM	None Detected					
FT3G-01	3rd Floor	PLM	None Detected	Mastic Associated with HA-09	HA-11	Miscellaneous	Non-friable/Good	
FT3G-02	3rd Floor	PLM	None Detected					
FT3G-03	3rd Floor	TEM	None Detected					

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
BUILDING M82 - FORMER POLICE STATION
HOSPITAL DISTRICT - OLD NAVY YARD
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
ST1-01	Stairs	PLM	None Detected	Stair Tread (Line)	HA-12	Miscellaneous	Non-friable/Good	500 SF
ST1-02	Stairs	PLM	None Detected					
ST1-03	Stairs	TEM	None Detected					
ST1-01	Stairs	PLM	None Detected	Mastic Associated with HA-12	HA-13	Miscellaneous	Non-friable/Good	
ST1-02	Stairs	PLM	None Detected					
ST1-03	Stairs	TEM	None Detected					
ST2-01	Stairs	PLM	None Detected	Stair Trend (Rut)	HA-14	Miscellaneous	Non-friable/Good	300 SF
ST2-02	Stairs	PLM	None Detected					
ST2-03	Stairs	TEM	None Detected					
ST2-01	Stairs	PLM	None Detected	Mastic Associated with HA-14	HA-15	Miscellaneous	Non-friable/Good	
ST2-02	Stairs	PLM	None Detected					
ST2-03	Stairs	TEM	None Detected					
WB-01a	2nd Floor	PLM	None Detected	Drywall	HA-16	Miscellaneous	Friable/Good	6,400
WB-02a	2nd Floor	PLM	None Detected	Drywall				
WB-03a	2nd Floor	PLM	None Detected	Drywall				
WB-01	2nd Floor	PLM	Insufficient Sample	Drywall				
WB-02	2nd Floor	PLM	Insufficient Sample	Drywall				
WB-03	2nd Floor	PLM	Insufficient Sample	Drywall				
WB-04	2nd Floor	PLM	None Detected	Drywall				
WB-09	1st Floor	PLM	None Detected	Drywall				
WB-01	2nd Floor	PLM	None Detected	Joint Compound	HA-17	Surfacing		
WB-02	2nd Floor	PLM	None Detected	Joint Compound				
WB-03	2nd Floor	PLM	None Detected	Joint Compound				
WB-04	2nd Floor	PLM	None Detected	Joint Compound				
WB-05	1st Floor	PLM	None Detected	Joint Compound				
WB-06	1st Floor	PLM	None Detected	Joint Compound				
WB-07	1st Floor	PLM	None Detected	Joint Compound				
WB-08	1st Floor	PLM	None Detected	Joint Compound				
WB-09	1st Floor	PLM	None Detected	Joint Compound				
FT2-01	2nd Floor	PLM	None Detected	12" Gray Floor Tile	HA-18	Miscellaneous	Non-friable/Good	800 SF
FT2-02	2nd Floor	PLM	None Detected					
FT2-03	2nd Floor	TEM	None Detected					
FT2-01	2nd Floor	PLM	None Detected	Mastic Associated with HA-18	HA-19	Miscellaneous	Non-friable/Good	
FT2-02	2nd Floor	PLM	None Detected					
FT2-03	2nd Floor	TEM	None Detected					
CB2-01	2nd Floor	PLM	None Detected	Cove Base & Mastic	HA-20	Miscellaneous	Non-friable/Good	500 LF
CB2-02	2nd Floor	PLM	None Detected					
CB2-03	2nd Floor	TEM	None Detected					

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
BUILDING M82 - FORMER POLICE STATION
HOSPITAL DISTRICT - OLD NAVY YARD
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
FT1-01	1st Floor	PLM	None Detected	12" White Floor Tile	HA-21	Miscellaneous	Non-friable/Good	800 SF
FT1-02	1st Floor	PLM	None Detected					
FT1-03	1st Floor	TEM	None Detected					
FT1-01	1st Floor	PLM	None Detected	Mastic Associated with HA-21	HA-22	Miscellaneous	Non-friable/Good	
FT1-02	1st Floor	PLM	None Detected					
FT1-03	1st Floor	TEM	None Detected					
FT1-01	1st Floor	PLM	None Detected	12" Black Floor Tile	HA-23	Miscellaneous	Non-friable/Good	800 SF
FT1-02	1st Floor	PLM	None Detected					
FT1-03	1st Floor	TEM	None Detected					
FT1-01	1st Floor	PLM	None Detected	Mastic Associated with HA-23	HA-24	Miscellaneous	Non-friable/Good	
FT1-02	1st Floor	PLM	None Detected					
FT1-03	1st Floor	TEM	None Detected					
CT-01	2nd Floor	PLM	None Detected	Ceiling Tile	HA-25	Miscellaneous	Non-friable/Good	3,200 SF
CT-02	1st Floor	PLM	None Detected	Ceiling Tile				
CT-03	Basement	PLM	None Detected	Ceiling Tile				
WBB-01	Basement	PLM	None Detected	Drywall	HA-26	Miscellaneous	Friable/Good	3,500 SF
WBB-02	Basement	PLM	None Detected					
WBB-03	Basement	PLM	None Detected					
WBB-04	Basement	PLM	None Detected					
WBB-01	Basement	PLM	None Detected	Joint Compound	HA-27	Surfacing		
WBB-02	Basement	PLM	None Detected					
WBB-03	Basement	PLM	None Detected					
WBB-04	Basement	PLM	None Detected					
WBB-05	Basement	PLM	None Detected					
RS-01	Pitched Roof	PLM	None Detected	Shingle	HA-28	Miscellaneous	Non-friable/Good	2,500 SF
RS-02	Pitched Roof	PLM	None Detected	Shingle				
RS-03	Pitched Roof	TEM	None Detected	Shingle				
RS-01	Pitched Roof	PLM	None Detected	Felt	HA-29	Miscellaneous	Non-friable/Good	
RS-02	Pitched Roof	PLM	None Detected	Felt				
RS-03	Pitched Roof	TEM	None Detected	Felt				
DC-01	**Door**	**PLM**	**4% Chrysotile**	**Door Caulking**	**HA-30**	Miscellaneous	Non-friable/Good	250 LF
DC-02	**Door**	**PLM**	**4% Chrysotile**	**Door Caulking**				
DC-03	**Door**	**TEM**	**Poitive Stop**	**Door Caulking**				

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BUILDING M82 - FORMER POLICE STATION
HOSPITAL DISTRICT - OLD NAVY YARD
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
WC-01	Windows	PLM	Non-Detected	Window Caulking	HA-31	Miscellaneous	Non-friable/Good	700 LF
WC-02	Windows	PLM	Non-Detected	Window Caulking				
WC-03	Windows	TEM	Non-Detected	Window Caulking				
RM-01	Flat Roof	PLM	Non-Detected	Roof Material	HA-32	Miscellaneous	Non-friable/Good	1,400, SF
RM-02	Flat Roof	PLM	Non-Detected	Roof Material				
RM-03	Flat Roof	TEM	Non-Detected	Roof Material				
RM-01	Flat Roof	PLM	Non-Detected	Felt	HA-33	Miscellaneous	Non-friable/Good	
RM-02	Flat Roof	PLM	Non-Detected	Felt				
RM-03	Flat Roof	TEM	Non-Detected	Felt				
DM-01	Basement	PLM	Non-Detected	Duct Mastic	HA-34	Miscellaneous	Non-friable/Good	500 SF
DM-02	Basement	PLM	Non-Detected	Duct Mastic				
DM-03	Basement	TEM	Non-Detected	Duct Mastic				

1) **Bold and shaded** items are identified ACMs
2) Quantities listed above are estimates to be used for inspection purposes only and should be field-verified for all other uses.
3) Quantities listed above should not be used in construction documents or bids

HA - Homogeneous Area
PLM - Polarized Light Microscopy
TEM - Transmission Electron Microscopy

SF - Square Feet
LF - Linear Feet

TABLE 2
LEAD PAINT RESULTS SAMPLE SUMMARY
BUILDING M82 - OLD POLICE STATION
HOSPITAL DISTRICT - OLD NAVY YARD
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Description	Location	Lab Results % wt
Pb-01	**White Paint**	**White Column**	**0.12%**
Pb-02	**Black Paint**	**Exterior Rail**	**0.58%**
Pb-03	**Multiple Colors (white)**	**Staircase (Interior)**	**1.10%**
Pb-04	**Door Frame**	**Door Frame**	**0.26%**
Pb-05	Black Paint	Hand Rail (Exterior Stair)	<0.0096
Pb-06	**Multiple Colors (white)**	**Exterior Stair**	**19.00%**

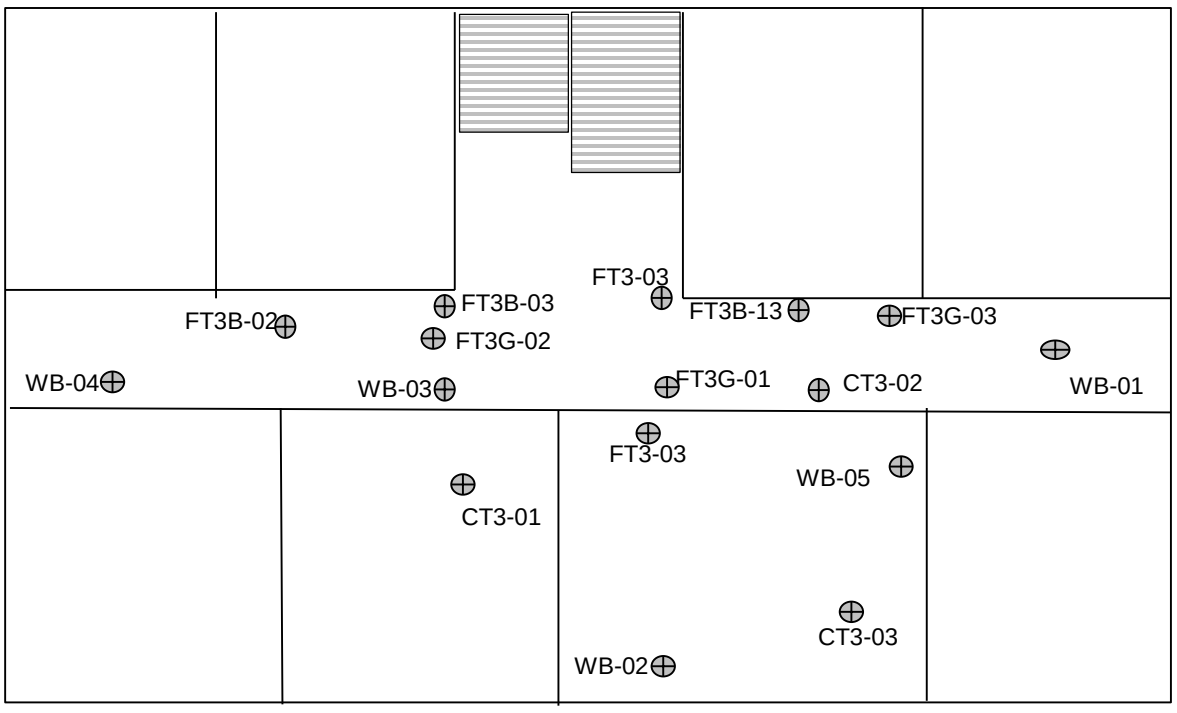
Notes:

1) Results above the SCDHEC regulatory limit (0.06%) must be disposed of properly.
2) Results in **BOLD** face were found above action levels.
3) OSHA Lead in Construction standard must be followed.
4) Please refer to sample diagrams for sample locations.

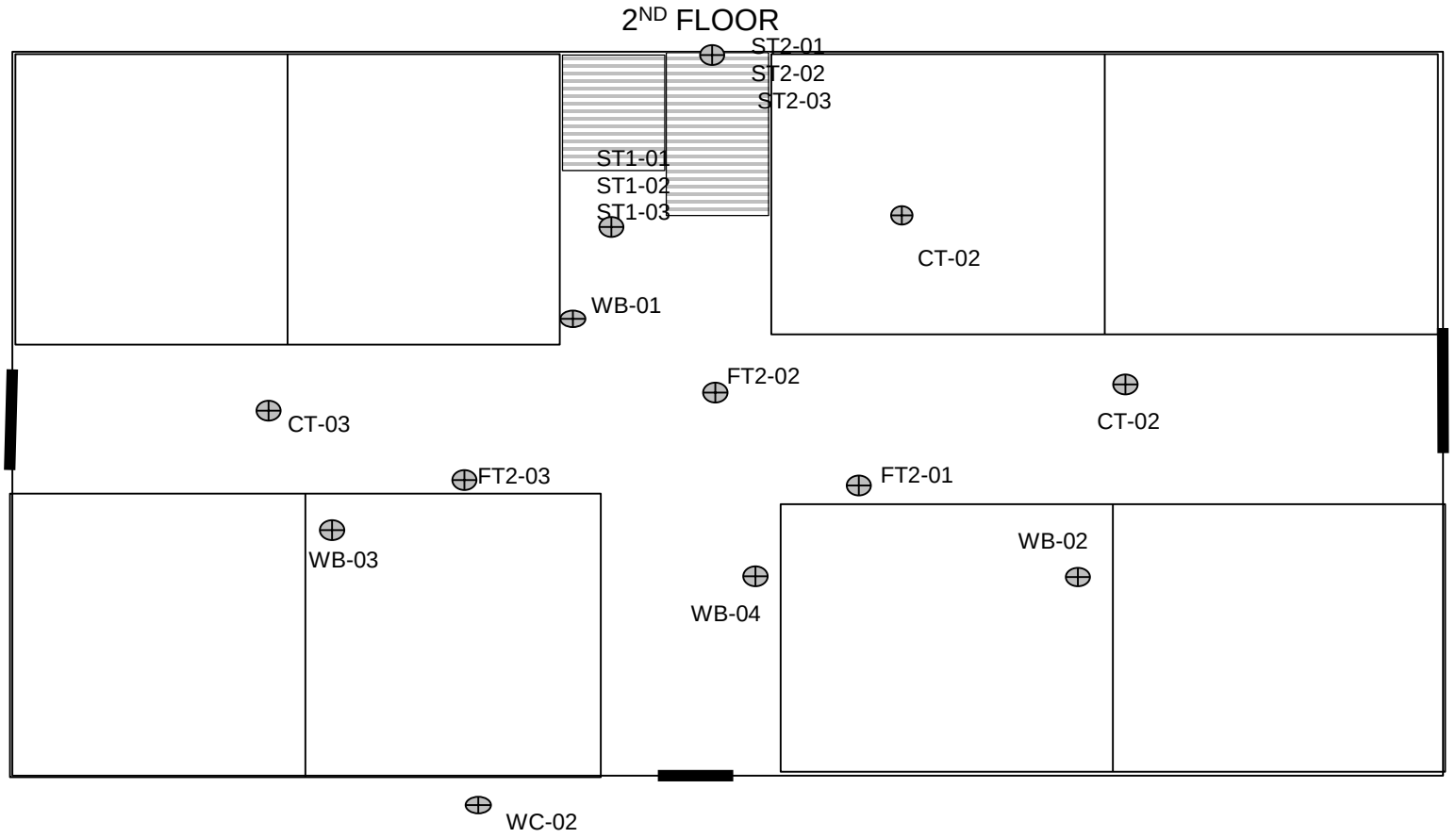
APPENDIX B

SITE DIAGRAM WITH SAMPLE LOCATIONS

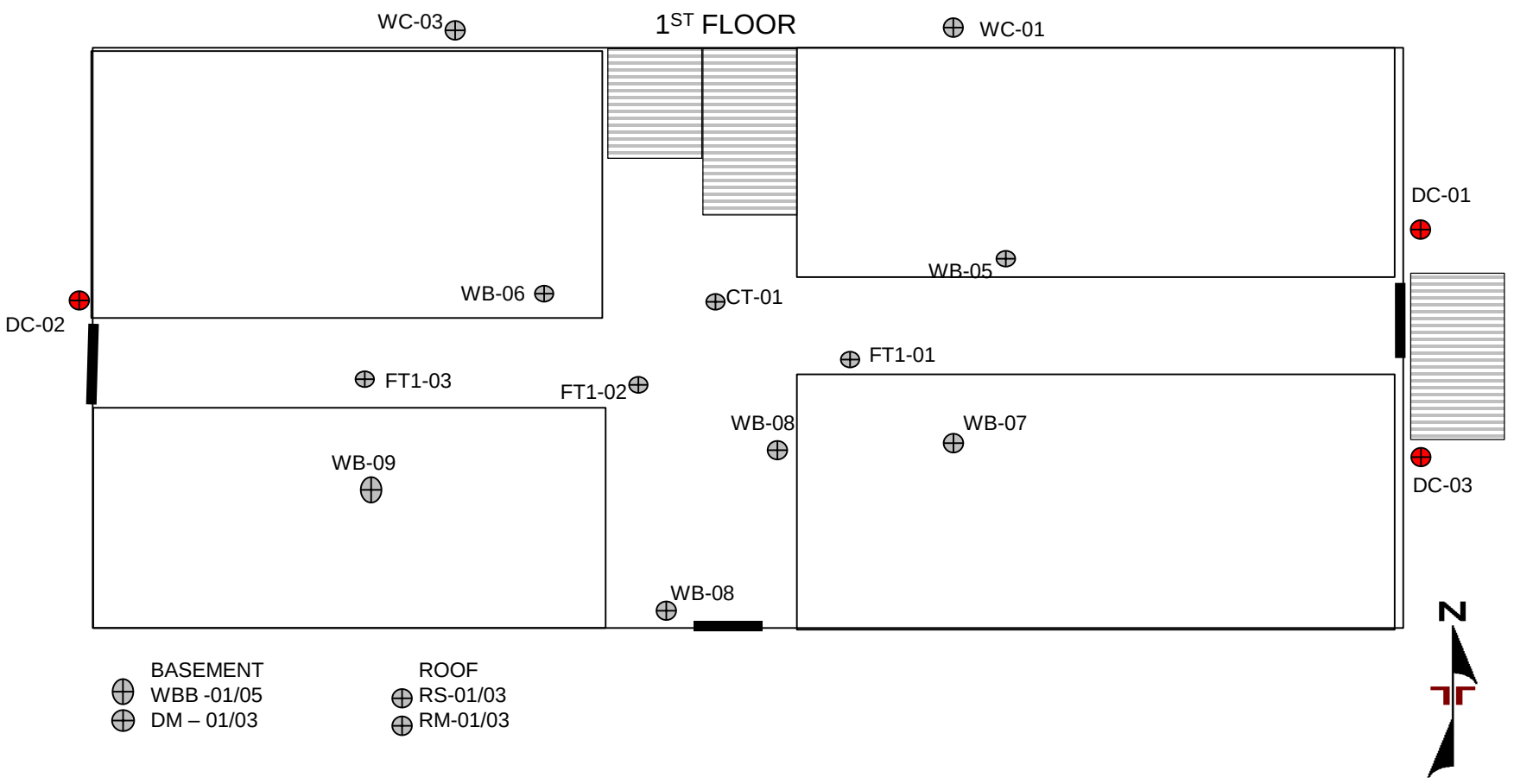
3RD FLOOR



2ND FLOOR



1ST FLOOR



BASEMENT
WBB -01/05
DM – 01/03

ROOF
RS-01/03
RM-01/03

N

LEGEND

NON-ACM

ACM

Project Manager: CCL	Project No. EN197470
Drawn by: CCL	Scale: N.T.S
Checked by: JAG	File Name:
Approved by: JAG	Date: 01.28.20

Terracon
Consulting Engineers & Scientists
1450 Fifth Street West North Charleston, South Carolina
PH. 843.884.1234 Terracon.com

GENERAL BUILDING LAYOUT / SAMPLE LOCATIONS

BUILDING M82 – OLD POLICE STATION
HOSPITAL DISTRICT OLD NAVY BASE
NORTH CHRLESTON, SOUTH CAROLINA

Figure
A-1

APPENDIX D

LABORATORY REPORTS

OrderID: 412000411

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 412000411

EMSL ANALYTICAL, INC.
706 GRALIN STREET
KERNERSVILLE, NC 27284
PHONE: 336-992-1025
FAX: 336-992-4175

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company : Terracon	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 1450 Fifth Street W	
City: North Charleston / **State/Province: SC**	**Zip/Postal Code: 29405** / **Country: US**
Report To (Name): Craig Langford	**Fax #:**
Telephone #: 843-442-6658	**Email Address: craig.langford@terracon.com**
Project Name/Number: EN197391 M82	
Please Provide Results: ☐ Fax ☒ Email / **Purchase Order:**	**U.S. State Samples Taken: SC**

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hours ☐ 6 Hours ☐ 24 Hrs ☐ 48 Hrs ☒ 3 Days ☐ 4 Days ☐ 5 Days ☐ 10 Days

**For TEM Air 3 hours/6 hours, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☒ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
WB3-01/05	Drywall/Joint Compound 3RD FLOOR	HA1	
CT3-01/03	Ceiling tile (2x4) 3RD FLOOR	HA2	
X CB3-01/03	Cove Base/mastic	HA3	TEM NOB
X FT3B-01/03	12" Floor tile Black/mastic	HA4	
X FT3-01/03	12" FT White/mastic	HA5	
X FT3G-01/03	12" FT Gray/mastic	HA6	(FT3G) 4th Floor
X ST1-01/03	STAIR TREAD (FOOT) (Line)	HA7	
X ST2-01/03	STAIR TREAD (NOT)	HA8	

Client Sample # (s): - **Total # of Samples:** 47

Relinquished (Client): [signature] **Date:** 01/13/20 **Time:** 1630

Received (Lab): Kyle Allison **Date:** 1/15/20 **Time:** 9AM F/X

Comments/Special Instructions:
Run TEM Concurrently for HA3, HA11 - TEM NOB for mastic only

7909 9346 8419

OrderID: 412000411

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 412000411

EMSL Analytical, Inc.
706 Gralin Street

Kernersville, NC 27284
PHONE: (336) 992-1025
FAX: (336) 992-4175

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
WB 01/09	DRYWALL / Joint Compound	HA9	
X FT2-01/03	12" FT LT GRAY / MASTIC	HA10 TEM NOB	
X CB2-01/03	COVE BASE / MASTIC	HA11 TEM NOB	
X FT1-01/03	12" FT (BLACK & WHITE) / MASTIC	HA12 (TEM NOB) (1ST FLOOR)	
~~FT2 01/03~~			
CT-01/03	Ceiling tile	HA13	
WBB-01/05	DRYWALL / Joint Compound	HA14	(BASEMENT)
RS 01/03	SHINGLE / FELT	HA15 TEM NOB	

*Comments/Special Instructions:

Page _____ of _____ pages

EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

http://www.EMSL.com / charlottelab@emsl.com

EMSL Order:	412000411
Customer ID:	WPCE62
Customer PO:	EN197391
Project ID:	

Attention:	Craig Langford	**Phone:**	(843) 442-6658
	Terracon, Inc.	**Fax:**	(843) 884-9234
	1450 Fifth Street West	**Received Date:**	01/15/2020 9:00 AM
	North Charleston, SC 29405	**Analysis Date:**	01/16/2020 - 01/17/2020
		Collected Date:	
Project:	EN197391 M82		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
WB3-01-Drywall *412000411-0001*	3rd Floor - Drywall - Joint Compound	Gray Fibrous Heterogeneous	3% Cellulose 2% Glass	95% Non-fibrous (Other)	None Detected
WB3-01-Joint Compound *412000411-0001A*	3rd Floor - Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB3-02-Drywall *412000411-0002*	3rd Floor - Drywall - Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
WB3-02-Joint Compound *412000411-0002A*	3rd Floor - Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB3-03-Drywall *412000411-0003*	3rd Floor - Drywall - Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
WB3-03-Joint Compound *412000411-0003A*	3rd Floor - Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB3-04-Joint Compound *412000411-0004* *No drywall present*	3rd Floor - Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB3-05-Joint Compound *412000411-0005* *No drywall present*	3rd Floor - Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
CT3-01 *412000411-0006*	3rd Floor - Ceiling Tile - 2x4	Gray/White Fibrous Heterogeneous	60% Cellulose 10% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
CT3-02 *412000411-0007*	3rd Floor - Ceiling Tile - 2x4	Gray/White Fibrous Heterogeneous	60% Cellulose 10% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
CT3-03 *412000411-0008*	3rd Floor - Ceiling Tile - 2x4	Gray/White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
CB3-01-Cove Base *412000411-0009*	Cove Base - Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
CB3-01-Mastic *412000411-0009A*	Cove Base - Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
CB3-02-Cove Base *412000411-0010*	Cove Base - Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 01/17/2020 15:29:19

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
CB3-02-Mastic *412000411-0010A*	Cove Base - Mastic	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
FT3B-01-Floor Tile *412000411-0012*	12" Floor Tile, Black - Mastic	Black Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT3B-01-Mastic *412000411-0012A*	12" Floor Tile, Black - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT3B-02-Floor Tile *412000411-0013*	12" Floor Tile, Black - Mastic	Black Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT3B-02-Mastic *412000411-0013A*	12" Floor Tile, Black - Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
FT3-01-Floor Tile *412000411-0015*	12" Floor Tile, White - Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT3-01-Mastic *412000411-0015A*	12" Floor Tile, White - Mastic	Brown/Tan Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
FT3-02-Floor Tile *412000411-0016*	12" Floor Tile, White - Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT3-02-Mastic *412000411-0016A*	12" Floor Tile, White - Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
FT3G-01-Floor Tile *412000411-0018*	12" Floor Tile, Gray - Mastic	Gray/White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT3G-01-Mastic *412000411-0018A*	12" Floor Tile, Gray - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT3G-02-Floor Tile *412000411-0019*	12" Floor Tile, Gray - Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT3G-02-Mastic *412000411-0019A*	12" Floor Tile, Gray - Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
ST1-01-Stair Tread *412000411-0021*	Stair Tread - Line	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
ST1-01-Mastic *412000411-0021A*	Stair Tread - Line	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
ST1-02-Stair Tread *412000411-0022*	Stair Tread - Line	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
ST1-02-Mastic *412000411-0022A*	Stair Tread - Line	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ST2-01-Stair Tread *412000411-0024*	Stair Tread - Rot	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
ST2-01-Mastic *412000411-0024A*	Stair Tread - Rot	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

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EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
ST2-02-Stair Tread *412000411-0025*	Stair Tread - Rot	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
ST2-02-Mastic *412000411-0025A*	Stair Tread - Rot	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
WB-01-Joint Compound *412000411-0027* *No drywall present*	Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-02-Joint Compound *412000411-0028* *No drywall present*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-03-Joint Compound *412000411-0029* *No drywall present*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-04-Drywall *412000411-0030*	Drywall - Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
WB-04-Joint Compound *412000411-0030A*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-05-Joint Compound *412000411-0031* *No drywall present*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-06-Joint Compound *412000411-0032* *No drywall present*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-07-Joint Compound *412000411-0033* *No drywall present*	Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-08-Joint Compound *412000411-0034* *No drywall present*	Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WB-09-Joint Compound *412000411-0035* *No drywall present*	Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT2-01-Floor Tile *412000411-0036*	12" FT, Lt. Gray - Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT2-01-Mastic *412000411-0036A*	12" FT, Lt. Gray - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT2-02-Floor Tile *412000411-0037*	12" FT, Lt. Gray - Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT2-02-Mastic *412000411-0037A*	12" FT, Lt. Gray - Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected

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EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
CB2-01-Cove Base *412000411-0039*	Cove Base - Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
CB2-01-Mastic *412000411-0039A*	Cove Base - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
CB2-02-Cove Base *412000411-0040*	Cove Base - Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
CB2-02-Mastic *412000411-0040A*	Cove Base - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT1-01-White Floor Tile *412000411-0042*	12" FT, Black & White - Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT1-01-Mastic *412000411-0042A*	12" FT, Black & White - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT1-01-Black Floor Tile *412000411-0042B*	12" FT, Black & White - Mastic	Black Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT1-01-Mastic *412000411-0042C*	12" FT, Black & White - Mastic	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT1-01-Leveler *412000411-0042D*	12" FT, Black & White - Mastic	Beige Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
FT1-02-White Floor Tile *412000411-0043*	12" FT, Black & White - Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT1-02-Mastic *412000411-0043A*	12" FT, Black & White - Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT1-02-Black Floor Tile *412000411-0043B*	12" FT, Black & White - Mastic	Black Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
FT1-02-Mastic/Leveler *412000411-0043C*	12" FT, Black & White - Mastic	Gray/Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
FT1-03-Leveler *412000411-0043D*	12" FT, Black & White - Mastic	Beige Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
CT-01 *412000411-0045*	Ceiling Tile	Gray/White Fibrous Heterogeneous	60% Cellulose 10% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
CT-02 *412000411-0046*	Ceiling Tile	Gray/White Fibrous Heterogeneous	60% Cellulose 10% Min. Wool	15% Perlite 15% Non-fibrous (Other)	None Detected
CT-03 *412000411-0047*	Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 5% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
WBB-01-Drywall *412000411-0048*	Drywall - Joint Compound	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
WBB-01-Joint Compound *412000411-0048A*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		45% Ca Carbonate 55% Non-fibrous (Other)	None Detected

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EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
WBB-02-Drywall *412000411-0049*	Drywall - Joint Compound	Gray Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
WBB-02-Joint Compound *412000411-0049A*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WBB-03-Drywall *412000411-0050*	Drywall - Joint Compound	Gray Non-Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
WBB-03-Joint Compound *412000411-0050A*	Drywall - Joint Compound	White/Rust Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WBB-04-Drywall *412000411-0051*	Drywall - Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
WBB-04-Joint Compound *412000411-0051A*	Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
WBB-05-Joint Compound *412000411-0052* *No drywall present*	Drywall - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
RS-01-Shingle *412000411-0053*	Shingle - Felt	Gray/Black Fibrous Heterogeneous	5% Glass	15% Quartz 15% Ca Carbonate 65% Non-fibrous (Other)	None Detected
RS-01-Felt *412000411-0053A*	Shingle - Felt	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
RS-02-Shingle *412000411-0054*	Shingle - Felt	Black Fibrous Homogeneous	5% Glass	10% Quartz 10% Ca Carbonate 75% Non-fibrous (Other)	None Detected
RS-02-Felt *412000411-0054A*	Shingle - Felt	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected

Analyst(s)

Eric Loomis (47)
Lacy Searcy (32)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

Initial report from: 01/17/2020 15:29:19

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Attention: Craig Langford
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Project: EN197391 M82

Phone: (843) 442-6658
Fax: (843) 884-9234
Received Date: 01/15/2020 9:00 AM
Analysis Date: 01/16/2020 - 01/18/2020
Collected Date:

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
CB3-03-Cove Base *412000411-0011*	Cove Base - Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
CB3-03-Mastic *412000411-0011A*	Cove Base - Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT3B-03-Floor Tile *412000411-0014*	12" Floor Tile, Black - Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT3B-03-Mastic *412000411-0014A*	12" Floor Tile, Black - Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT3-03-Floor Tile *412000411-0017*	12" Floor Tile, White - Mastic	Gray Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT3-03-Mastic *412000411-0017A*	12" Floor Tile, White - Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT3G-03-Floor Tile *412000411-0020*	12" Floor Tile, Gray - Mastic	Gray Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT3G-03-Mastic *412000411-0020A*	12" Floor Tile, Gray - Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
ST1-03-Stair Tread *412000411-0023*	Stair Tread - Line	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
ST1-03-Mastic *412000411-0023A*	Stair Tread - Line	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
ST2-03-Stair Tread *412000411-0026*	Stair Tread - Rot	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
ST2-03-Mastic *412000411-0026A*	Stair Tread - Rot	Gray/Beige Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/20/2020 07:22:37

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Attention: Craig Langford
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Project: EN197391 M82

Phone: (843) 442-6658
Fax: (843) 884-9234
Received Date: 01/15/2020 9:00 AM
Analysis Date: 01/16/2020 - 01/18/2020
Collected Date:

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
FT2-03-Floor Tile *412000411-0038*	12" FT, Lt. Gray - Mastic	Gray Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT2-03-Mastic *412000411-0038A*	12" FT, Lt. Gray - Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
CB2-03-Cove Base *412000411-0041*	Cove Base - Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
CB2-03-Mastic *412000411-0041A*	Cove Base - Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
FT1-03-White Floor Tile *412000411-0044*	12" FT, Black & White - Mastic	White Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT1-03-Mastic *412000411-0044A*	12" FT, Black & White - Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT1-03-Black Floor Tile *412000411-0044B*	12" FT, Black & White - Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
FT1-03-Mastic *412000411-0044C*	12" FT, Black & White - Mastic	Beige Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
RS-03-Shingle *412000411-0055*	Shingle - Felt	Gray/Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
RS-03-Felt *412000411-0055A*	Shingle - Felt	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/20/2020 07:22:37

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000411
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Attention: Craig Langford
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Project: EN197391 M82

Phone: (843) 442-6658
Fax: (843) 884-9234
Received Date: 01/15/2020 9:00 AM
Analysis Date: 01/16/2020 - 01/18/2020
Collected Date:

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types

Analyst(s)

Aaron Hartley (2)
Derrick Young (20)

Lee Plumley, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/20/2020 07:22:37

OrderID: 412000960

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 412000960

EMSL ANALYTICAL, INC.
10801 SOUTHERN LOOP BLVD
PINEVILLE, NC 28134
PHONE: 704-525-2205
FAX: 704-525-2382

Company : Terracon		EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: 1450 Fifth Street West			
City: North Charleston	State/Province: SC	Zip/Postal Code: 29405	Country:
Report To (Name): Craig Langford		Fax #:	
Telephone #: 843.442.6658		Email Address: craig.langford@terrcaon.com	
Project Name/Number: EM197470 mg2			
Please Provide Results: ☐ Fax ☒ Email	Purchase Order:	U.S. State Samples Taken: SC	

Turnaround Time (TAT) Options* – Please Check

☒ 3 Hours ☐ 6 Hours ☐ 24 Hrs ☐ 48 Hrs ☐ 3 Days ☐ 4 Days ☐ 5 Days ☐ 10 Days

**For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
WB-001A/03A	Drywall		

Client Sample # (s): - **Total # of Samples:** 3

Relinquished (Client): **Date:** 1/29/20 **Time:** 1630

Received (Lab): Kyle Nelson **Date:** 1/30/20 **Time:** 9AM F/x

Comments/Special Instructions:

7958 1990 9300

EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

http://www.EMSL.com / charlottelab@emsl.com

EMSL Order:	412000960
Customer ID:	WPCE62
Customer PO:	EN197470
Project ID:	

Attention:	Craig Langford	**Phone:**	(843) 442-6658
	Terracon, Inc.	**Fax:**	(843) 884-9234
	1450 Fifth Street West	**Received Date:**	01/30/2020 9:00 AM
	North Charleston, SC 29405	**Analysis Date:**	01/30/2020
		Collected Date:	
Project:	EN197470 M82		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
WB-01A *412000960-0001*	Drywall	Gray Fibrous Heterogeneous	6% Cellulose 2% Glass	92% Non-fibrous (Other)	None Detected
WB-02A *412000960-0002*	Drywall	Gray Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
WB-03A *412000960-0003*	Drywall	Brown/Gray Fibrous Homogeneous	2% Cellulose 1% Glass	97% Non-fibrous (Other)	None Detected

Analyst(s)

Eric Loomis (2)

Katherine Sluder (1)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

Initial report from: 01/30/2020 10:41:43

OrderID: 412000410

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 412000410

EMSL ANALYTICAL, INC.
706 GRALIN STREET
KERNERSVILLE, NC 27284
PHONE: 336-992-1025
FAX: 336-992-4175

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company : Terracon	**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 1450 Fifth Street W	
City: North Charleston / **State/Province: SC**	**Zip/Postal Code: 29405** / **Country: US**
Report To (Name): Craig Langford	**Fax #:**
Telephone #: 843-442-6658	**Email Address: craig.langford@terracon.com**
Project Name/Number: EN197391 M82	
Please Provide Results: ☐ Fax ☒ Email	**Purchase Order:** / **U.S. State Samples Taken: SC**

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hours ☐ 6 Hours ☐ 24 Hrs ☑ 48 Hrs ☐ 3 Days ☐ 4 Days ☐ 5 Days ☐ 10 Days

**For TEM Air 3 hours/6 hours, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☑ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: / **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
DC-01/03	Door Caulk	HA1 TEM NOB	
WC-01/03	Window Caulk	HA2	
RM-01/03	Roof Material/Felt?	HA3	
DM-01/03	Duct mastic	HA4	

Client Sample # (s): - **Total # of Samples:** 12

Relinquished (Client): [signature] **Date:** 2/14/20 **Time:** 1635

Received (Lab): Kyle Nelson **Date:** 1/15/20 **Time:** 9AM FX

Comments/Special Instructions:
Run TEM NOB Concurrently

7909 9346 8441

EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

http://www.EMSL.com / charlottelab@emsl.com

EMSL Order:	412000410
Customer ID:	WPCE62
Customer PO:	EN197391
Project ID:	

Attention:	Craig Langford	**Phone:**	(843) 442-6658
	Terracon, Inc.	**Fax:**	(843) 884-9234
	1450 Fifth Street West	**Received Date:**	01/15/2020 9:00 AM
	North Charleston, SC 29405	**Analysis Date:**	01/15/2020
		Collected Date:	
Project:	EN197391 M82		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
DC-01 *412000410-0001*	Door Caulk	White Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
DC-02 *412000410-0002*	Door Caulk	White Non-Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
WC-01 *412000410-0004*	Window Caulk	Brown Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
WC-02 *412000410-0005*	Window Caulk	Brown Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
RM-01-Roofing *412000410-0007*	Roof Material - Felt	Black Fibrous Homogeneous	10% Synthetic	15% Ca Carbonate 4% Mica 71% Non-fibrous (Other)	None Detected
RM-01-Felt *412000410-0007A*	Roof Material - Felt	Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
RM-02-Roofing *412000410-0008*	Roof Material - Felt	Black Fibrous Homogeneous	5% Glass	10% Ca Carbonate 85% Non-fibrous (Other)	None Detected
RM-02-Felt *412000410-0008A*	Roof Material - Felt	Black Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
RM-02-Insulation *412000410-0008B*	Roof Material - Felt	Brown/White Fibrous Homogeneous	80% Cellulose	10% Perlite 10% Non-fibrous (Other)	None Detected
RM-03-Insulation *412000410-0008C*	Roof Material - Felt	Brown/White Fibrous Homogeneous	80% Cellulose	10% Perlite 10% Non-fibrous (Other)	None Detected
DM-01-Mastic *412000410-0010*	Duct Mastic	Tan Non-Fibrous Homogeneous	2% Fibrous (Other)	98% Non-fibrous (Other)	None Detected
DM-01-Wrap *412000410-0010A*	Duct Mastic	Brown/Silver Fibrous Heterogeneous	20% Cellulose 10% Glass	70% Non-fibrous (Other)	None Detected
DM-01-Insulation *412000410-0010B*	Duct Mastic	Yellow Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
DM-02-Mastic *412000410-0011*	Duct Mastic	White Non-Fibrous Homogeneous	5% Glass 4% Fibrous (Other)	91% Non-fibrous (Other)	None Detected
DM-02-Wrap *412000410-0011A*	Duct Mastic	Brown/Silver Fibrous Homogeneous	10% Cellulose 15% Glass	75% Non-fibrous (Other)	None Detected
DM-02-Insulation *412000410-0011B*	Duct Mastic	Yellow Fibrous Homogeneous	98% Glass	2% Non-fibrous (Other)	None Detected

Initial report from: 01/16/2020 10:21:34

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order:	412000410
Customer ID:	WPCE62
Customer PO:	EN197391
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
DM-03-Wrap *412000410-0011C*	Duct Mastic	Brown/Silver Fibrous Homogeneous	10% Cellulose 10% Glass	80% Non-fibrous (Other)	None Detected

Analyst(s)
Gloriana Ramirez (7)
Sarah Breneman (10)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 01/16/2020 10:21:34

EMSL Analytical, Inc.
10801 Southern Loop Blvd Pineville, NC 28134
Tel/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com / charlottelab@emsl.com

EMSL Order: 412000410
Customer ID: WPCE62
Customer PO: EN197391
Project ID:

Attention: Craig Langford
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Project: EN197391 M82

Phone: (843) 442-6658
Fax: (843) 884-9234
Received Date: 01/15/2020 9:00 AM
Analysis Date: 01/16/2020
Collected Date:

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
DC-03 *412000410-0003*	Door Caulk				
Positive Stop (Not Analyzed)					
WC-03 *412000410-0006*	Window Caulk	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
RM-03-Roofing *412000410-0009*	Roof Material - Felt	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
RM-03-Felt *412000410-0009A*	Roof Material - Felt	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
DM-03 *412000410-0012*	Duct Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Katherine Sluder (4)

Lee Plumley, Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/16/2020 14:56:07

OrderID: 412000396

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only)*: 412000396

EMSL ANALYTICAL, INC.
706 GRALIN STREET
KERNERSVILLE, NC 27284
336-992-1025

Company : Terracon		**EMSL-Bill to:** ☐ Same ☐ Different If Bill to is Different note instructions in Comments**	
Street: 1450 Fifth Street West		*Third Party Billing requires written authorization from third party*	
City: North Charleston	**State/Province: sc**	**Zip/Postal Code: 29405**	**Country:**
Report To (Name): Craig Langford		**Fax #:**	
Telephone #: 843-442-6658		**Email Address: craig.langford@terracon.com**	
Project Name/Number: EN197391 M82			
Please Provide Results: ☐ Fax ☐ Email	**Purchase Order:**	**U.S. State Samples Taken:**	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hours | ☐ 6 Hours | ☐ 24 Hours | ☒ 48 Hours | ☐ 3 Days | ☐ 4 Days | ☐ 5 Days | ☐ 10 Days

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☐ mg/cm² ☒ % by wt.	SW846-7000B/7420 or AOAC 974.02	Flame Atomic Absorption	0.01%	☒
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES	0.5 µg/filter	☐
Wipe* ☐ ASTM ☐ non ASTM *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B/7420	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	0.5 µg/wipe	☐
TCLP	SW846-1311/7420/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7420	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7421	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW86-6010B or C	ICP-AES	1 mg/kg (ppm)	☐
Wastewater	SM3111B or SW846-7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	☐
Drinking Water	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐

Other:	**Preservation Method (Water):**
Name of Sampler:	**Signature of Sampler:**

Sample #	Location	Volume/Area	Date/Time Sampled
Pb-01	white Column		
Pb-02	Exterior Rail		
Pb-03	Staircase (Int)		
Pb-04	Door Frame		
Pb-05	Hand Rail (Ext stair)		
Pb-06	Ext Stair		

Client Sample #'s - **Total # of Samples:** 6

Relinquished (Client):	Cyrus Kyle Nash	**Date:**	1/14/20	**Time:**	1640
Received (Lab):		**Date:**	1/15/20	**Time:**	9AM F/x

Comments: 7909 9346 8441

EMSL Analytical, Inc.
10801 Southern Loop Blvd, Pineville, NC 28134
Phone/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com charlottelab@emsl.com

EMSL Order:	412000396
CustomerID:	WPCE62
CustomerPO:	EN197391
ProjectID:	

Attn: **Craig Langford**
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Phone:	(843) 884-1234
Fax:	(843) 884-9234
Received:	01/15/20 9:00 AM
Collected:	

Project: **EN197391 M82**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Weight*	*Lead* **Concentration**
Pb-01	*412000396-0001*		1/16/2020	0.2028 g	0.12 % wt
	Site: White Column				
Pb-02	*412000396-0002*		1/16/2020	0.2026 g	0.58 % wt
	Site: Exterior Rail				
Pb-03	*412000396-0003*		1/16/2020	0.2078 g	1.1 % wt
	Site: Staircase (Int.)				
Pb-04	*412000396-0004*		1/16/2020	0.2422 g	0.26 % wt
	Site: Door Frame				
Pb-05	*412000396-0005*		1/16/2020	0.2094 g	<0.0096 % wt
	Site: Hand Rail (Ext. Stair)				
Pb-06	*412000396-0006*		1/16/2020	0.2592 g	19 % wt
	Site: Ext. Stair				

Kyle Collins, Technical Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC AIHA-LAP, LLC - ELLAP 192283

Initial report from 01/16/2020 12:52:12

APPENDIX E

INSPECTOR CREDENTIALS

CRAIG C. LANGFORD

SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL – ASBESTO SECTION

CONSULTANT/PROJECT DESIGN – PD-00032_EXP 07/10/20
CONSULTANT/BUILDING INSPECTOR ASB-22775_EXP 07/09/20
AIR SAMPLER/MONITOR ASB-22599_EXP 07/08/20
SUPERVISOR SA-03094_EXP 07/08/20